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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,494	08/28/2003	Bradley T. Estes	4002-3385	6987

52196 7590 09/13/2006

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EXAMINER

REIMERS, ANNETTE R

ART UNIT PAPER NUMBER

3733

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/650,494

Applicant(s)

ESTES ET AL.

Examiner

Annette R. Reimers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4, 15 and 28-103 is/are pending in the application.
- 4a) Of the above claim(s) 4, 32-34, 47-49, 51-56, 65, 66, 77, 78 and 89-103 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 2, 3, 15, 28-31, 35-46, 50, 57-64, 67-76 and 79-88 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/29/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Invention I, claims 2-4, 15 and 28-88, and Species b, in the reply filed on June 19, 2006 is acknowledged. The traversal is on the ground(s) that Species b, c, and d, i.e., figures 2-5, are all directed to the same species of invention. Examiner agrees with applicant that Species b, c, and d, i.e., figures 2-5, are all directed to the same species of invention.

Examiner further acknowledges that applicant believes that claims 2, 3, 15, 28-31, 35-46, 50, 57-64, 67-76, and 70-88 read on the elected species, i.e., figures 2-5. Examiner agrees with applicant that claims 2, 3, 15, 28-31, 35-46, 50, 57-64, 67-76, and 70-88 read on the elected species, i.e., figures 2-5.

Claims 4, 32-34, 47-49, 51-56, 65, 66, 77, 78 and 89-103 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on June 19, 2006.

Specification

The abstract of the disclosure is objected to because it contains implied language, i.e., "This invention." Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract

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on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 3, 15, 28-31, 35-46, 50, 59-64, 67, 70, 73-76 and 79-88 are rejected under 35 U.S.C. 102(e) as being anticipated by Ferree (US Patent Number 6,491,724).

Ferree discloses first and second expandable spacers, e.g. 910 and 920, for implantation between opposing endplates of adjacent vertebrae, the spacer comprising an elongate body composed of a shape memory polymeric material and comprising peripheral sidewall, the body is provided in a first configuration wherein the body expands to a second configuration, the second portion having a greater area than the first portion, wherein the shape memory polymeric material is selected from the group consisting of polylactide, polyglycolide, poly(lactide-co-glycolide), polyurethane, poly(ethylene-co-vinyl acetate), poly(ethylene-co-propylene), poly(ethylene-co-

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propylene-co-diene), poly(ξ -caprolactone), poly(β -hydroxybutyrate), poly(β -hydroxybutyrate-co-hydroxyvalerate), poly(methacrylate), poly(methylmethacrylate), poly(acrylate), and mixtures, copolymers and blends thereof (see column 6, lines 20-39), wherein the peripheral wall can contact the apophyseal ring of the vertebral endplate, wherein the peripheral wall defines an internal cavity comprising at least one opening extending into the interior cavity, wherein the internal cavity comprises an osteogenic material selected from the group consisting of: a bone morphogenic protein, a recombinant bone morphogenic protein, demineralized bone matrix, and mixtures thereof (see column 2, lines 6-7), wherein the body in the first configuration has a first cross-sectional area and the body in the second configuration has a second cross-sectional area greater than the first cross-sectional area, wherein the body is provided in an original configuration having a original cross-sectional area that is greater than the first cross-sectional area, wherein the original cross-sectional area is greater than the second cross-sectional area, wherein the body is provided in an original configuration having an original height and the body in the second configuration has a second height less than the original height, wherein the body in the second configuration mating conforms to the opposing endplates of the adjacent vertebrae, wherein the body in the first configuration is compressed into a flattened configuration (see figures 1-9B).

The first and the second expandable spacers can be composed of the same shape memory polymeric material, wherein the second expandable spacer is provided in a third configuration and sized substantially the same as the first spacer in the first

configuration, wherein the second spacer expands to a fourth configuration and is sized substantially the same as the first spacer in the second configuration, wherein the second spacer expands to a fourth configuration and is sized differently than the first spacer in the second configuration, wherein the second expandable spacer is provided in third configuration and is sized differently than the first spacer in the first configuration. wherein the second spacer expands to a fourth configuration and is sized substantially the same as the first spacer in the second configuration, wherein the second spacer expands to a fourth configuration and is sized differently than the first spacer in the second configuration, wherein the first spacer is a mirror image of the second spacer (see figures 1-9B, 10A-10G, and 13A-13G).

With regard to the statement of intended use and other functional statements, they do not impose any structural limitations on the claims distinguishable over Ferree, which is capable of being used as claimed if one so desires to do so. *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Furthermore, the law of anticipation does not require that the reference “teach” what the subject patent teaches, but rather it is only necessary that the claims under attack “read on” something in the reference. *Kalman v. Kimberly Clark Corp.*, 218 USPQ 781 (CCPA 1983). Furthermore, the manner in which a device is intended to be employed does not differentiate the claimed apparatus from prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Claims 2, 3, 28-31, 35-39, 42-46, 50, 59-60, 62-64, 67, 70, 73-76 and 79-88 are rejected under 35 U.S.C. 102(e) as being anticipated by Foley et al. (US Patent Number 6,193,757), cited by applicant.

Foley et al. disclose various embodiments of first and second expandable spacers, e.g. 70, 80, 100, for implantation between opposing endplates of adjacent vertebrae, the spacer comprising an cylindrical elongate body composed of a shape memory polymeric material and comprising peripheral sidewall, the body is provided in a first configuration wherein the body expands to a second configuration, the second portion having a greater area than the first portion, wherein the peripheral wall can contact the apophyseal ring of the vertebral endplate, wherein the peripheral wall defines an internal cavity comprising at least one opening extending into the interior cavity, wherein the internal cavity comprises an osteogenic material, wherein the body in the first configuration has a first cross-sectional area and the body in the second configuration has a second cross-sectional area greater than the first cross-sectional area, wherein the body is provided in an original configuration having a original cross-sectional area that is greater than the first cross-sectional area, wherein the original cross-sectional area is greater than the second cross-sectional area, wherein the body is provided in an original configuration having an original height and the body in the second configuration has a second height less than the original height, wherein the body in the second configuration mating conforms to the opposing endplates of the adjacent vertebrae, wherein the body in the first configuration is compressed into a flattened configuration (see figures 1-9c, 13-15, and 18a-22).

The first and the second expandable spacers can be composed of the same shape memory polymeric material, wherein the second expandable spacer is provided in a third configuration and sized substantially the same as the first spacer in the first configuration, wherein the second spacer expands to a fourth configuration and is sized substantially the same as the first spacer in the second configuration, wherein the second spacer expands to a fourth configuration and is sized differently than the first spacer in the second configuration, wherein the second expandable spacer is provided in third configuration and is sized differently than the first spacer in the first configuration. wherein the second spacer expands to a fourth configuration and is sized substantially the same as the first spacer in the second configuration, wherein the second spacer expands to a fourth configuration and is sized differently than the first spacer in the second configuration, wherein the first spacer is a mirror image of the second spacer (see figures 1-9c, 13-15, and 18a-22).

With regard to the statement of intended use and other functional statements, they do not impose any structural limitations on the claims distinguishable over Foley et al., which is capable of being used as claimed if one so desires to do so. *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Furthermore, the law of anticipation does not require that the reference “teach” what the subject patent teaches, but rather it is only necessary that the claims under attack “read on” something in the reference. *Kalman v. Kimberly Clark Corp.*, 218 USPQ 781 (CCPA 1983). Furthermore, the manner in which a device is intended to be employed does not

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differentiate the claimed apparatus from prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 57, 58, 68, 69, 71, and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferree (US Patent Number 6,491,724).

Ferree discloses the claimed invention except the body exhibiting a compressive modulus of between about 2 MPa and about 30 MPa or between about 8 MPa and about 15 MPa, and a height between about 3 and about 20 mm or between about 4 and about 14 mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Ferree with the body exhibiting a compressive modulus of between about 2 MPa and about 30 MPa or between about 8 MPa and about 15 MPa, and a height between about 3 and about 20 mm or between about 4 and about 14 mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Claims 57, 58, 68, 69, 71, and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foley et al. (US Patent Number 6,193,757), cited by applicant.

Foley et al. disclose the claimed invention except the body exhibiting a compressive modulus of between about 2 MPa and about 30 MPa or between about 8 MPa and about 15 MPa, and a height between about 3 and about 20 mm or between about 4 and about 14 mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Foley et al. with the body exhibiting a compressive modulus of between about 2 MPa and about 30 MPa or between about 8 MPa and about 15 MPa, and a height between about 3 and about 20 mm or between about 4 and about 14 mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO 892 for art cited of interest.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Annette R. Reimers whose telephone number is (571) 272-7135. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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EDUARDO C. ROBERT
SUPERVISORY PATENT EXAMINER